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EXAMINER

RUDY, ANDREW J

ART UNIT	PAPER NUMBER
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3687

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

**Supplemental
Notice of Allowability**

Application No.

09/976,876

Examiner

Andrew Joseph Rudy

Applicant(s)

RODRIGO, ANTHONY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the 15 July 2008 Amendment.
2. ☒ The allowed claim(s) is/are 1,2,4-19,24 and 62-100.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-19, 24 and 62-100 are allowed. Applicant's July 15, 2008 REMARKS, in juxtaposition with the accompanying Amendment, are convincing.

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 25-59 and 61 have been cancelled.

Claims 62-100 are added as follows:

62. (New) An apparatus, comprising:

a processor configured with executable instructions that:

couple one or more bridge modules to form a logical network layer between one or more network elements providing billable services and one or more charging elements;

receive charging events at the one or more bridge modules, wherein the charging events record details of the billable services; and

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manage charging transactions at the network between the network elements and their respective charging elements via the one or more bridge modules through the application of rules to the charging transaction initiated by corresponding charging events, wherein managing the charging transactions comprises applying the rules to transform the charging events to a format recognizable by targeted charging elements.

63. (New) The apparatus as in Claim 62, wherein the executable instructions further cause the apparatus to generate and transmit the charging events by the network elements providing the billable services, wherein the charging events comprise service use parameters used by the charging elements.

64. (New) The apparatus as in Claim 62, wherein the executable instructions further:

implement an application programming interface (API) at each of the network elements providing billable services to interface each of the respective network elements to the one or more bridge modules; and

generate and transmit the charging events by the network elements providing the billable services, wherein transmitting the charging events comprises transmitting XML-formatted charging events pursuant to the API.

65. (New) The apparatus as in Claim 62, wherein receiving charging events comprises intercepting the charging events dispatched by the network elements to the charging elements.

66. (New) The apparatus as in Claim 62, wherein managing charging transactions comprises applying the rules to transform the charging events to a format recognizable by targeted charging elements.

67. (New) The apparatus as in Claim 66, wherein applying the rules to transform the charging events comprises converting the charging events from a first format to a second format.

68. (New) The apparatus as in Claim 66, wherein applying the rules to transform the charging events comprises filtering the charging events to prevent transmission of particular ones of the charging events to the charging elements.

69. (New) The apparatus as in Claim 66, wherein applying the rules to transform the charging events comprises recalculating fields of the charging events to present the fields in units utilized in the charging elements.

70. (New) The apparatus as in Claim 66, wherein applying the rules to transform the charging events comprises routing the charging events to multiple destinations.

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71. (New) The apparatus as in Claim 66, wherein the executable instructions further transmit the transformed charging events via interface objects corresponding to respective charging elements.

72. (New) The apparatus as in Claim 71, wherein the executable instructions further direct the transformed charging events to the interface objects corresponding to targeted charging elements based on the rules and the transformed charging events.

73. (New) The apparatus as in Claim 72, wherein directing the transformed charging events further comprises applying the rules to the transformed charging events to identify addresses of the interface objects corresponding to the targeted charging elements.

74. (New) The apparatus as in Claim 62, wherein managing charging transactions comprises selecting an interface object for communicating with a corresponding charging element, wherein selecting an interface object comprises identifying one of a plurality of the interface objects as determined by object configuration rules.

75. (New) The apparatus as in Claim 62, wherein managing charging transactions comprises performing a plurality of transaction operations with a plurality of the charging elements in a sequence dictated by the rules.

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76. (New) The apparatus as in Claim 75, wherein performing a plurality of transaction operations with a plurality of the charging elements comprises applying the rules to responsive messages from at least one of the charging elements to perform one or more of the transaction operations.

77. (New) The apparatus as in Claim 62, wherein managing charging transactions comprises coordinating one or more communications with the charging elements to carry out the charging transaction.

78. (New) The apparatus as in Claim 77, wherein coordinating the communications with the charging elements comprises transmitting a first call to a first charging element in response to applying the rules to the charging transaction initiated by the corresponding charging event.

79. (New) The apparatus as in Claim 78, wherein coordinating the communications with the charging elements further comprises receiving a response to the first call from the first charging element, and transmitting a second call to a second charging element in response to applying the rules to the response to the first call.

80. (New) The apparatus as in Claim 62, wherein the executable instructions further receive the rules at a console coupled to the primary bridge module.

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81. A computer-readable storage medium encoded with instructions that, when executed by an apparatus, perform:

coupling a plurality of bridge modules to form a logical network layer between one or more network elements providing billable services and one or more charging elements;

receiving charging events at the bridge modules, wherein the charging events record details of the billable services; and

managing charging transactions at a network between the network elements and their respective charging elements via the bridge modules through the application of rules to the charging transaction initiated by corresponding charging events, wherein each of the bridge modules is configured with a subset of the rules assigned to the services managed by that bridge module, and one of the bridge modules is designated as a primary bridge module to receive the rules and distribute the subsets of rules to the remaining bridge modules.

82. (New) The computer-readable storage medium as in Claim 81, wherein the executable instructions further cause the apparatus to generate and transmit the charging events by the network elements providing the billable services, wherein the charging events comprise service use parameters used by the charging elements.

83. (New) The computer-readable storage medium as in Claim 81, wherein the executable instructions further cause the apparatus to:

implement an application programming interface (API) at each of the network elements providing billable services to interface each of the respective network elements to the one or more bridge modules; and

generate and transmit the charging events by the network elements providing the billable services, wherein transmitting the charging events comprises transmitting XML-formatted charging events pursuant to the API.

84. (New) The computer-readable storage medium as in Claim 81, wherein receiving charging events comprises intercepting the charging events dispatched by the network elements to the charging elements.

85. (New) The computer-readable storage medium as in Claim 81, wherein managing charging transactions comprises applying the rules to transform the charging events to a format recognizable by targeted charging elements.

86. (New) The computer-readable storage medium as in Claim 85, wherein applying the rules to transform the charging events comprises converting the charging events from a first format to a second format.

87. (New) The computer-readable storage medium as in Claim 85, wherein applying the rules to transform the charging events comprises filtering the charging events to prevent transmission of particular ones of the charging events to the charging elements.

88. (New) The computer-readable storage medium as in Claim 85, wherein applying the rules to transform the charging events comprises recalculating fields of the charging events to present the fields in units utilized in the charging elements.

89. (New) The computer-readable storage medium as in Claim 85, wherein applying the rules to transform the charging events comprises routing the charging events to multiple destinations.

90. (New) The computer-readable storage medium as in Claim 85, wherein the executable instructions further cause the apparatus to transmit the transformed charging events via interface objects corresponding to respective charging elements.

91. (New) The computer-readable storage medium as in Claim 90, wherein the executable instructions further cause the apparatus to direct the transformed charging events to the interface objects corresponding to targeted charging elements based on the rules and the transformed charging events.

92. (New) The computer-readable storage medium as in Claim 91, wherein directing the transformed charging events further comprises applying the rules to the transformed charging events to identify addresses of the interface objects corresponding to the targeted charging elements.

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93. (New) The computer-readable storage medium as in Claim 81, wherein managing charging transactions comprises selecting an interface object for communicating with a corresponding charging element, wherein selecting an interface object comprises identifying one of a plurality of the interface objects as determined by object configuration rules.

94. (New) The computer-readable storage medium as in Claim 81, wherein managing charging transactions comprises performing a plurality of transaction operations with a plurality of the charging elements in a sequence dictated by the rules.

95. (New) The computer-readable storage medium as in Claim 94, wherein performing a plurality of transaction operations with a plurality of the charging elements comprises applying the rules to responsive messages from at least one of the charging elements to perform one or more of the transaction operations.

96. (New) The computer-readable storage medium as in Claim 81, wherein managing charging transactions comprises coordinating one or more communications with the charging elements to carry out the charging transaction.

97. (New) The computer-readable storage medium as in Claim 85, wherein managing charging transactions comprises selecting an interface object for communicating with a

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corresponding charging element, wherein selecting an interface object comprises identifying one of a plurality of the interface objects as determined by object configuration rules.

98. (New) The computer-readable storage medium as in Claim 85, wherein managing charging transactions comprises performing a plurality of transaction operations with a plurality of the charging elements in a sequence dictated by the rules.

99. (New) The computer-readable storage medium as in Claim 98, wherein performing a plurality of transaction operations with a plurality of the charging elements comprises applying the rules to responsive messages from at least one of the charging elements to perform one or more of the transaction operations.

100. (New) The computer-readable storage medium as in Claim 85, wherein managing charging transactions comprises coordinating one or more communications with the charging elements to carry out the charging transaction.

Authorization for this examiner's amendment was given in a telephone interview with Mr. William Ashley (Reg. No. 51,419) on October 27, 2008 and December 16, 2008.

3. Applicant previously cancelled claims 3, 20-23 and 60.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Joseph Rudy whose telephone number is 571-272-6789. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Gart can be reached on 571-272-3955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Joseph Rudy/
Primary Examiner, Art Unit 3687